

ABSTRACT OF THE DISCLOSURE

Provided are a polymerization catalyst composition for ethylene oxide which can give polyethylene oxide having a molecular weight lower than that of the prior art and a relatively narrow molecular weight distribution, and a process for the production of polyethylene oxide by the use of the catalyst composition. The catalyst composition makes it possible to produce polyethylene oxide having a molecular weight ranging from about 20,000 to 200,000 through direct polymerization in a high yield with economic advantage, and is characterized by comprising an organoaluminum compound and at least one member selected from among alkali metal alkoxides and alkali metal hydroxides. According to the process, polyethylene oxide having a molecular weight falling within the above range can be produced by the use of the catalyst composition under the same polymerization conditions as those of the prior art.